THE INVENTION CLAIMED IS:

1. A fused silica extraction capillary having an internal solid phase extraction surface that binds an analyte, wherein at least some portion of the capillary is coiled at a bend radius of less than 3 cms.

2. The extraction capillary of claim 1, wherein the capillary comprises synthetic fused silica and a polymer coating.

3. The extraction capillary of claim 1, wherein at least some portion of the capillary is coiled at a bend radius of between 0.2 and 2 cms.

4. The extraction capillary of claim 2, wherein the total outer diameter of the capillary is in the range of 90 to 1000 microns.

5. The extraction tubing of claim 4, wherein the total outer diameter of the capillary is in the range of 150 to 850 microns.

6. The extraction capillary of claim 5, wherein the total outer diameter of the capillary is in the range of 238 to 435 microns.

7. The extraction capillary of claim 4, wherein the polymer coating comprises polyimide.

8. The extraction capillary of claim 1, wherein the analyte is a biomolecule.

9. The extraction capillary of claim 8, wherein the biomolecule is a protein or polynucleotide.

10. The extraction capillary of claim 1, wherein the extraction surface comprises an immobilized metal ion.

11. The extraction capillary of claim 1, wherein the extraction surface comprises a protein.

12. The extraction capillary of claim 11, wherein the protein is Protein A or Protein G.

13. The extraction capillary of claim 1, wherein said bend radius produces a Calculated Applied Stress upon the capillary of greater than 100 kpsi.

14. The extraction capillary of claim 13, wherein the Calculated Applied Stress is in the range of 100 and 500 kpsi.

15. An open capillary channel device comprising a fused silica extraction capillary having a first end connected to a pump for pumping liquid and gas, and a second end, the pump being a syringe pump, pressurized container, centrifugal pump or electrokinetic pump.

16. A multiplexed solid phase extraction instrument comprising a plurality of the extraction devices of claim 15 arrayed for the parallel processing of multiple samples.

17. A method for molecular open tubular solid phase extraction, the method comprising the steps of

a) adsorbing analyte molecules in a sample solution to the extraction surface of a fused silica extraction capillary tubing of claim 1, the capillary tubing having a total capillary volume; and

b) desorbing a substantial portion of the analyte molecules from the extraction surface with a desorbent liquid passed through the capillary channel

18. The method of claim 18, wherein the analyte molecules is desorbed with a Tube Enrichment Factor of at least 1.

19. The method of Claim 18, wherein the direction of passage of the desorption solution through the column reversed during the desorption step.

20. The method of Claim 18, wherein a wash solution is passed through the capillary channel between steps (a) and (b).

21. The method of Claim 5 18, wherein the wash solution is any liquid present in the capillary channel is substantially displaced from the capillary channel by a gas before step (b).

22. The method of Claim 21, wherein the direction of passage of the gas through the column is reversed during displacement of the liquid.

23. The method of Claim 18, wherein the extraction surface has an affinity binding agent bound thereto, and the affinity binding agents is:

a) a chelated metal having a binding affinity for a biomolecule analyte;

b) a protein having a binding affinity for a protein analyte;

c) an organic molecule or group having a binding affinity for a protein analyte;

d) a sugar having a binding affinity for a protein analyte;

e) nucleic acid having a binding affinity for a protein analyte;

f) a nucleic acid or a sequence of nucleic acids having a binding affinity for a nucleic acid analyte; or

g) a small molecule binding agent having a binding affinity for a small molecule analyte.

24. The method of Claim 18 wherein the analyte concentration is increased at least 1000 times.

25. The method of Claim 18, wherein the analyte molecules are desorbed with a Tube Enrichment Factor from within a range from 1 to 400.

26. The open capillary channel device of Claim 15, wherein the second end is free for manual positioning.